OIPE

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RAW SEQUENCE LISTING                    DATE: 02/07/2002
PATENT APPLICATION:  US/10/050,673      TIME: 14:38:47

Input Set : N:\Crf3\RULE60\10050673.raw
Output Set: N:\CRF3\02072002\J050673.raw
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 1 <110> APPLICANT: David M. Knipe
 2        Travis J. Taylor
 3        Elizabeth McNamee
 4 <120> TITLE OF INVENTION: Replication-Competent Virus Expressing A
 5        Fusion Protein
 6 <130> FILE REFERENCE: HU98-05
 7 <140> CURRENT APPLICATION NUMBER: 10/050,673
 8 <141> CURRENT FILING DATE: 2002-01-16
10 <150> PRIOR APPLICATION NUMBER: US/09/127,227
11 <151> PRIOR FILING DATE: 1998-07-31
14 <160> NUMBER OF SEQ ID NOS: 6
15 <170> SOFTWARE: FastSEQ for Windows Version 3.0
17 <210> SEQ ID NO: 1
18 <211> LENGTH: 4359
19 <212> TYPE: DNA
20 <213> ORGANISM: herpesvirus
21 <220> FEATURE:
22 <221> NAME/KEY: CDS
23 <222> LOCATION: (1)...(4359)
24 <400> SEQUENCE: 1
25      atg gag aca aag ccc aag acg gca acc acc atc aag gtc ccc ccc ggg      48
26      Met Glu Thr Lys Pro Lys Thr Ala Thr Thr Ile Lys Val Pro Pro Gly
27       1               5                  10                  15
28      ccc ctg gga tac gtg tac gct cgc gcg tgt ccg tcc gaa ggc atc gag      96
29      Pro Leu Gly Tyr Val Tyr Ala Arg Ala Cys Pro Ser Glu Gly Ile Glu
30                   20                  25                  30
31      ctt ctg gcg tta ctg tcg gcg cgc agc ggc gat gcc gac gtc gcc gtg     144
32      Leu Leu Ala Leu Leu Ser Ala Arg Ser Gly Asp Ala Asp Val Ala Val
33                   35                  40                  45
34      gcg ccc ctg gtc gtg ggc ctg acc gtg gag agc ggc ttt gag gcc aac     192
35      Ala Pro Leu Val Val Gly Leu Thr Val Glu Ser Gly Phe Glu Ala Asn
36           50                  55                  60
37      gta gcc gtg gtc gtg ggt tct cgc acg acg ggg ctc ggg ggt acc gcg     240
38      Val Ala Val Val Val Gly Ser Arg Thr Thr Gly Leu Gly Gly Thr Ala
39       65                  70                  75                  80
40      gtg tcc ctg aaa ctg acg cca tcg cac tac agc tcg tcc gtg tac gtc     288
41      Val Ser Leu Lys Leu Thr Pro Ser His Tyr Ser Ser Ser Val Tyr Val
42                   85                  90                  95
43      ttt cac ggc ggc cgg cac ctg gac ccc agc acc cag gcc cca aac ctg     336
44      Phe His Gly Gly Arg His Leu Asp Pro Ser Thr Gln Ala Pro Asn Leu
45                   100                 105                 110
46      acg cga ctc tgc gag cgg gca cgc cgc cat ttt ggc ttt tcg gac tac     384
47      Thr Arg Leu Cys Glu Arg Ala Arg Arg His Phe Gly Phe Ser Asp Tyr
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48              115                  120                  125
49   acc ccc cgg ccc ggc gac ctc aaa cac gag acg acg ggg gag gcg ctg    432
50   Thr Pro Arg Pro Gly Asp Leu Lys His Glu Thr Thr Gly Glu Ala Leu
51           130                  135                  140
52   tgt gag cgc ctc ggc ctg gac ccg gac cgc gcc ctc ctg tat ctg gtc    480
53   Cys Glu Arg Leu Gly Leu Asp Pro Asp Arg Ala Leu Leu Tyr Leu Val
54   145                  150                  155                  160
55   gtt acc gag ggc ttc aag gag gcc gtg tgc atc aac aac acc ttt ctg    528
56   Val Thr Glu Gly Phe Lys Glu Ala Val Cys Ile Asn Asn Thr Phe Leu
57               165                  170                  175
58   cac ctg gga ggc tcg gac aag gta acc ata ggc ggg gcg gag gtg cac    576
59   His Leu Gly Gly Ser Asp Lys Val Thr Ile Gly Gly Ala Glu Val His
60               180                  185                  190
61   cgc ata ccc gtg tat ccg ttg cag ctg ttc atg ccg gat ttt agc cgg    624
62   Arg Ile Pro Val Tyr Pro Leu Gln Leu Phe Met Pro Asp Phe Ser Arg
63           195                  200                  205
64   gtc atc gcc gag ccg ttc aac gcc aac cac cga tcg atc ggg gag aat    672
65   Val Ile Ala Glu Pro Phe Asn Ala Asn His Arg Ser Ile Gly Glu Asn
66           210                  215                  220
67   ttt acc tac ccg ctt ccg ttt ttt aac cgc ccc ctc aac cgc ctc ctg    720
68   Phe Thr Tyr Pro Leu Pro Phe Phe Asn Arg Pro Leu Asn Arg Leu Leu
69   225                  230                  235                  240
70   ttc gag gcg gtc gtg gga ccc gcc gcc gtg gca ctg cga tgc cga aac    768
71   Phe Glu Ala Val Val Gly Pro Ala Ala Val Ala Leu Arg Cys Arg Asn
72               245                  250                  255
73   gtg gac gcc gtg gcc cgc gcg gcc gcc cac ctg gcg ttt gac gaa aac    816
74   Val Asp Ala Val Ala Arg Ala Ala Ala His Leu Ala Phe Asp Glu Asn
75               260                  265                  270
76   cac gag ggc gcc gcc ctc ccc gcc gac att acg ttc acg gcc ttc gaa    864
77   His Glu Gly Ala Ala Leu Pro Ala Asp Ile Thr Phe Thr Ala Phe Glu
78               275                  280                  285
79   gcc agc cag ggt aag acc ccg cgg ggt ggg cgc gac ggc ggc ggc aag    912
80   Ala Ser Gln Gly Lys Thr Pro Arg Gly Gly Arg Asp Gly Gly Gly Lys
81           290                  295                  300
82   ggc ccg gcg ggc ggg ttc gaa cag cgc ctg gcc tcc gtc atg gcc gga    960
83   Gly Pro Ala Gly Gly Phe Glu Gln Arg Leu Ala Ser Val Met Ala Gly
84   305                  310                  315                  320
85   gac gcc gcc ctg gcc ctc gag tct atc gtg tcg atg gcc gtc ttc gac    1008
86   Asp Ala Ala Leu Ala Leu Glu Ser Ile Val Ser Met Ala Val Phe Asp
87               325                  330                  335
88   gag ccg ccc acc gac atc tcc gcg tgg ccg ctg tgc gag ggc cag gac    1056
89   Glu Pro Pro Thr Asp Ile Ser Ala Trp Pro Leu Cys Glu Gly Gln Asp
90               340                  345                  350
91   acg gcc gcg gcc cgc gcc aac gcc gtc ggg gcg tac ctg gcg cgc gcc    1104
92   Thr Ala Ala Ala Arg Ala Asn Ala Val Gly Ala Tyr Leu Ala Arg Ala
93           355                  360                  365
94   gcg gga ctc gtg ggg gcc atg gta ttt agc acc aac tcg gcc ctc cat    1152
95   Ala Gly Leu Val Gly Ala Met Val Phe Ser Thr Asn Ser Ala Leu His
96           370                  375                  380
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 97    ctc acc gag gtg gac gac gcc ggt ccg gcg gac cca aag gac cac agc    1200
 98    Leu Thr Glu Val Asp Asp Ala Gly Pro Ala Asp Pro Lys Asp His Ser
 99    385             390             395             400
100    aaa ccc tcc ttt tac cgc ttc ttc ctc gtg ccc ggg acc cac gtg gcg    1248
101    Lys Pro Ser Phe Tyr Arg Phe Phe Leu Val Pro Gly Thr His Val Ala
102                405             410             415
103    gcc aac cca cag gtg gac cgc gag gga cac gtg gtg ccc ggg ttc gag    1296
104    Ala Asn Pro Gln Val Asp Arg Glu Gly His Val Val Pro Gly Phe Glu
105                420             425             430
106    ggt cgg ccc acc gcg ccc ctc gtc ggc gga acc cag gaa ttt gcc ggc    1344
107    Gly Arg Pro Thr Ala Pro Leu Val Gly Gly Thr Gln Glu Phe Ala Gly
108                435             440             445
109    gag cac ctg gcc atg ctg tgt ggg ttt tcc ccg gcg ctg ctg gcc aag    1392
110    Glu His Leu Ala Met Leu Cys Gly Phe Ser Pro Ala Leu Leu Ala Lys
111                450             455             460
112    atg ctg ttt tac ctg gag cgc tgc gac ggc ggc gtg atc gtc ggg cgc    1440
113    Met Leu Phe Tyr Leu Glu Arg Cys Asp Gly Gly Val Ile Val Gly Arg
114    465             470             475             480
115    cag gag atg gac gtg ttt cga tac gtc gcg gac tcc aac cag acc gac    1488
116    Gln Glu Met Asp Val Phe Arg Tyr Val Ala Asp Ser Asn Gln Thr Asp
117                485             490             495
118    gtg ccc tgc aac ctg tgc acc ttc gac acg cgc cac gcc tgc gta cac    1536
119    Val Pro Cys Asn Leu Cys Thr Phe Asp Thr Arg His Ala Cys Val His
120                500             505             510
121    acg acg ctc atg cgc ctc cgg gcg cgc cat ccc aag ttc gcc agc gcc    1584
122    Thr Thr Leu Met Arg Leu Arg Ala Arg His Pro Lys Phe Ala Ser Ala
123                515             520             525
124    gcc cgc gga gcc atc ggc gtc ttc ggg acc atg aac agc atg tac agc    1632
125    Ala Arg Gly Ala Ile Gly Val Phe Gly Thr Met Asn Ser Met Tyr Ser
126                530             535             540
127    gac tgc gac gtg ctg gga aac tac gcc gcc ttc tcg gcc ctg aag cgc    1680
128    Asp Cys Asp Val Leu Gly Asn Tyr Ala Ala Phe Ser Ala Leu Lys Arg
129    545             550             555             560
130    gcg gac gga tcc gag acc gcc cgg acc atc atg cag gag acg tac cgc    1728
131    Ala Asp Gly Ser Glu Thr Ala Arg Thr Ile Met Gln Glu Thr Tyr Arg
132                565             570             575
133    gcg gcg acc gag cgc gtc atg gcc gaa ctc gag acc ctg cag tac gtg    1776
134    Ala Ala Thr Glu Arg Val Met Ala Glu Leu Glu Thr Leu Gln Tyr Val
135                580             585             590
136    gac cag gcg gtc ccc acg gcc atg ggg cgg ctg gag acc atc atc acc    1824
137    Asp Gln Ala Val Pro Thr Ala Met Gly Arg Leu Glu Thr Ile Ile Thr
138                595             600             605
139    aac cgc gag gcc ctg cat acg gtg gtg aac aac gtc agg cag gtc gtg    1872
140    Asn Arg Glu Ala Leu His Thr Val Val Asn Asn Val Arg Gln Val Val
141                610             615             620
142    gac cgc gag gtg gag cag ctg atg cgc aac ctg gtg gag ggg agg aac    1920
143    Asp Arg Glu Val Glu Gln Leu Met Arg Asn Leu Val Glu Gly Arg Asn
144    625             630             635             640
145    ttc aag ttt cgc gac ggt ctg ggc gag gcc aac cac gcc atg tcc ctg    1968
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146       Phe Lys Phe Arg Asp Gly Leu Gly Glu Ala Asn His Ala Met Ser Leu
147                       645                 650                 655
148       acg ctg gac ccg tac gcg tgc ggg cca tgc ccc ctg ctt cag ctt ctc      2016
149       Thr Leu Asp Pro Tyr Ala Cys Gly Pro Cys Pro Leu Leu Gln Leu Leu
150                       660                 665                 670
151       ggg cgg cga tcc aac ctc gcc gtg tat cag gac ctg gcc ctg agc cag      2064
152       Gly Arg Arg Ser Asn Leu Ala Val Tyr Gln Asp Leu Ala Leu Ser Gln
153                       675                 680                 685
154       tgc cac ggg gtg ttc gcc ggg cag tcg gtc gag ggg cgc aac ttt cgc      2112
155       Cys His Gly Val Phe Ala Gly Gln Ser Val Glu Gly Arg Asn Phe Arg
156                       690                 695                 700
157       aat caa ttc caa ccg gtg ctg cgg cgg cgc gtg atg gac atg ttt aac      2160
158       Asn Gln Phe Gln Pro Val Leu Arg Arg Arg Val Met Asp Met Phe Asn
159       705                 710                 715                 720
160       aac ggg ttt ctg tcg gcc aaa acg ctg acg gtc gcg ctc tcg gag ggg      2208
161       Asn Gly Phe Leu Ser Ala Lys Thr Leu Thr Val Ala Leu Ser Glu Gly
162                       725                 730                 735
163       gcg gct atc tgc gcc ccc agc cta acg gcc ggc cag acg gcc ccc gcc      2256
164       Ala Ala Ile Cys Ala Pro Ser Leu Thr Ala Gly Gln Thr Ala Pro Ala
165                       740                 745                 750
166       gag agc agc ttc gag ggc gac gtt gcc cgc gtg acc ctg ggg ttt ccc      2304
167       Glu Ser Ser Phe Glu Gly Asp Val Ala Arg Val Thr Leu Gly Phe Pro
168                       755                 760                 765
169       aag gag ctg cgc gtc aag agc cgc gtg ttg ttc gcg ggc gcg agc gcc      2352
170       Lys Glu Leu Arg Val Lys Ser Arg Val Leu Phe Ala Gly Ala Ser Ala
171           770                 775                 780
172       aac gcg tcc gag gcc gcc aag gcg cgg gtc gcc agc ctc cag agc gcc      2400
173       Asn Ala Ser Glu Ala Ala Lys Ala Arg Val Ala Ser Leu Gln Ser Ala
174       785                 790                 795                 800
175       tac cag aag ccc gac aag cgc gtg gac atc ctc ctc gga ccg ctg ggc      2448
176       Tyr Gln Lys Pro Asp Lys Arg Val Asp Ile Leu Leu Gly Pro Leu Gly
177                       805                 810                 815
178       ttt ctg ctg aag cag ttc cac gcg gcc atc ttc ccc aac ggc aag ccc      2496
179       Phe Leu Leu Lys Gln Phe His Ala Ala Ile Phe Pro Asn Gly Lys Pro
180                       820                 825                 830
181       ccg ggg tcc aac cag ccg aac ccg cag tgg ttc tgg acg gcc ctc caa      2544
182       Pro Gly Ser Asn Gln Pro Asn Pro Gln Trp Phe Trp Thr Ala Leu Gln
183                       835                 840                 845
184       cgc aac cag ctt ccc gcc cgg ctc ctg tcg cgc gag gac atc gag acc      2592
185       Arg Asn Gln Leu Pro Ala Arg Leu Leu Ser Arg Glu Asp Ile Glu Thr
186           850                 855                 860
187       atc gcg ttc att aaa aag ttt tcc ctg gac tac ggc gcg ata aac ttt      2640
188       Ile Ala Phe Ile Lys Lys Phe Ser Leu Asp Tyr Gly Ala Ile Asn Phe
189       865                 870                 875                 880
190       att aac ctg gcc ccc aac aac gtg agc gag ctg gcg atg tac tac atg      2688
191       Ile Asn Leu Ala Pro Asn Asn Val Ser Glu Leu Ala Met Tyr Tyr Met
192                       885                 890                 895
193       gca aac cag att ctg cgg tac tgc gat cac tcg aca tac ttc atc aac      2736
194       Ala Asn Gln Ile Leu Arg Tyr Cys Asp His Ser Thr Tyr Phe Ile Asn
```

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195                 900              905              910
196    acc ctc acg gcc atc atc gcg ggg tcc cgc cgt ccc ccc agc gtg cag    2784
197    Thr Leu Thr Ala Ile Ile Ala Gly Ser Arg Arg Pro Pro Ser Val Gln
198              915              920              925
199    gcg gcg gcc gcg tgg tcc gcg cag ggc ggg gcg ggc ctg gag gcc ggg    2832
200    Ala Ala Ala Ala Trp Ser Ala Gln Gly Gly Ala Gly Leu Glu Ala Gly
201              930              935              940
202    gcc cgc gcg ctg atg gac gcc gtg gac gcg cat ccg ggc gcg tgg acg    2880
203    Ala Arg Ala Leu Met Asp Ala Val Asp Ala His Pro Gly Ala Trp Thr
204    945              950              955              960
205    tcc atg ttc gcc agc tgc aac ctg ctg cgg ccc gtc atg gcg gcg cgc    2928
206    Ser Met Phe Ala Ser Cys Asn Leu Leu Arg Pro Val Met Ala Ala Arg
207              965              970              975
208    ccc atg gtc gtg ttg ggg ttg agc atc agc aaa tac tac ggc atg gcc    2976
209    Pro Met Val Val Leu Gly Leu Ser Ile Ser Lys Tyr Tyr Gly Met Ala
210              980              985              990
211    ggc aac gac cgt gtg ttt cag gcc ggg aac tgg gcc agc ctg atg ggc    3024
212    Gly Asn Asp Arg Val Phe Gln Ala Gly Asn Trp Ala Ser Leu Met Gly
213              995              1000             1005
214    ggc aaa aac gcg tgc ccg ctc ctt att ttt gac cgc acc cgc aag ttc    3072
215    Gly Lys Asn Ala Cys Pro Leu Leu Ile Phe Asp Arg Thr Arg Lys Phe
216              1010             1015             1020
217    gtc ctg gcc tgt ccc cgg gcc ggg ttt gtg tgc gcg gcc tcg aac ctc    3120
218    Val Leu Ala Cys Pro Arg Ala Gly Phe Val Cys Ala Ala Ser Asn Leu
219    1025             1030             1035             1040
220    ggc ggc gga gcg cac gaa agc tcg ctg tgc gag cag ctc cgg ggc att    3168
221    Gly Gly Gly Ala His Glu Ser Ser Leu Cys Glu Gln Leu Arg Gly Ile
222              1045             1050             1055
223    atc tcc gag ggc ggg gcg gcc gtc gcc agt agc gtg ttc gtg gcg acc    3216
224    Ile Ser Glu Gly Gly Ala Ala Val Ala Ser Ser Val Phe Val Ala Thr
225              1060             1065             1070
226    gtg aaa agc ctg ggg ccc cgc acc cag cag ctg cag atc gag gac tgg    3264
227    Val Lys Ser Leu Gly Pro Arg Thr Gln Gln Leu Gln Ile Glu Asp Trp
228              1075             1080             1085
229    ctg gcg ctc ctg gag gac gag tac cta agc gag gag atg atg gag ctg    3312
230    Leu Ala Leu Leu Glu Asp Glu Tyr Leu Ser Glu Glu Met Met Glu Leu
231              1090             1095             1100
232    acc gcg cgt gcc ctg gag cgc ggc aac ggc gag tgg tcg acg gac gcg    3360
233    Thr Ala Arg Ala Leu Glu Arg Gly Asn Gly Glu Trp Ser Thr Asp Ala
234    1105             1110             1115             1120
235    gcc ctg gag gtg gcg cac gag gcc gag gcc cta gtc agc caa ctc ggc    3408
236    Ala Leu Glu Val Ala His Glu Ala Glu Ala Leu Val Ser Gln Leu Gly
237              1125             1130             1135
238    aac gcc ggg gag gtg ttt aac ttt ggg gat ttt ggc tgc gag gac gac    3456
239    Asn Ala Gly Glu Val Phe Asn Phe Gly Asp Phe Gly Cys Glu Asp Asp
240              1140             1145             1150
241    aac gcg acg ccg ttc ggc ggc ccg ggg gcc ccg gga ccg gca ttt gcc    3504
242    Asn Ala Thr Pro Phe Gly Gly Pro Gly Ala Pro Gly Pro Ala Phe Ala
243              1155             1160             1165
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VERIFICATION SUMMARY   DATE: 02/07/2002
PATENT APPLICATION: US/10/050,673   TIME: 14:38:48

Input Set : **N:\Crf3\RULE60\10050673.raw**
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